DRAPER DIGEST

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WORLD'S LARGEST MANUFACTURER
OF AUTOMATIC LOOMS.

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Guide Posts That Will Help You When Buying New Looms

You are thinking of buying new looms.

The looms you buy will have to serve you for many years. Your profits, your success as a manufacturer and the welfare of your help depend upon the choice you make. Your decision is of vital importance. Have you thought out what you may expect of the looms you decide to buy?

Let's talk it over and set down some of the things you should regard as prime essentials. Then keep them as guideposts and forget all those things that will not contribute to your success.

First of all, you want the loom that will make the most money for your mill.

To do so, it must weave a meter of cloth at lower cost than any other loom you can buy.

To insure low cost, it must be the loom that will give you the greatest output—per loom and per unit of labor.

It must be the loom with a proved record of being operated everywhere with the largest number of looms per weaver, the most looms per loomfixer.

It must be a loom with a proved record of weaving fabrics of the highest quality with a minimum per cent of second quality cloth.

It must be the loom that will produce these quality fabrics automatically, with the least effort and skill on the part of your help.

Earning power and quality of product are not to be taken on hearsay or theory. They must be proved by the records of mill operation in all countries and on a great variety of fabrics.

It must be a loom with low maintenance cost.

It must be a loom easy to operate, requiring only a brief training period for new weavers.

It must be a loom so designed and built that stops from mechanical faults are few.

It must be a loom specially designed to make the work of keeping it in prime operating condition easy for your loomfixers. Replacement of broken parts must not be too difficult and time-consuming. Excessive loss of weaving time while repairs are being made increases cost by reducing production.

Proved Record of the Draper Loom

The loom that has a proved record in these vital essentials above all other looms ever built anywhere in the world is the Draper high speed loom.

The proof is found in its overwhelming acceptance by the textile industry of the United States, where 95% of the

single-shuttle looms weaving cotton fabrics from print cloths to fine fancies and 75% of the rayon looms on both filament and spun yarns are Drapers.

The same success has attended its introduction in other countries of the world.

The Draper loom is built by an organization that started in business 133 years ago. For a century and a third its business has been the development by research and invention of better machines for textile mills. It is today the oldest builder of improved machinery in the United States.

During the 55 years since it invented and sold the first automatic loom, Draper Corporation has built and sold over 700,000 Northrop and Draper looms and acquired the experience and the know-how that have made it the largest manufacturer of automatic looms in the world.

Dominant Leader in Loom Design

For five generations, Draper has been undisputed world-leader in making improvements on the mechanisms of the one-shuttle loom. Practically all such improvements that advanced the art of weaving were Draper inventions, although many of them were later copied by builders in other countries.

That is why Draper looms are supreme.

That is why Draper looms in most cases weave cloth at American wages cheaper than any similar fabric can be woven on any other loom in any other country.

Simplicity of Construction

An outstanding feature that has contributed to the remarkable success of the Draper loom is its simplicity of construction. This appeals to your workers.

The first step in building a better loom device is to design a mechanism that will give the desired result. The next step, persistently followed in all Draper new design,

is to eliminate unneccessary parts and simplify the construction to reduce the labor of loomfixers and weavers and increase the number of looms each can handle.

Simplicity is the watchword of Draper design. It is attained only as the result of long experience and constant research. It assures low cost of operation and maintenance. It means efficiency in the weave room and profit to all users of Draper looms.

Draper Looms Are Well Built

Draper looms are well and accurately built to high Draper standards. A loom is one of your workers. Like your other workers it must be fittingly dressed for the job it has to do.

It is a fixed Draper policy to improve the finish and adopt accurate machining wherever they insure better or more economical loom operation. It is not Draper policy to adopt these or any other changes in design for the sake of appearance or other sentimental reasons or where its research proves the advantages are outweighed by the disadvantages such changes would inflict upon the operators of the loom.

There are those who advocate an archless loom.

They cite certain advantages, such as appearance of the weave room and its oversight.

Both our experience and the most diligent research prove that a loom with an arch runs more steadily, will weave better cloth and more of it, at lower maintenance and labor cost than an archless loom.

The loom with an arch is easier for both the fixer and the weaver.

X-2 Model is High Speed Loom for Cottons

Draper High Speed looms are built in a series of models specially designed for the weaving of practically all cotton and rayon fabrics woven with one shuttle.

The X-2 Model is the loom for the widest range of cotton fabrics. It is a cam loom weaving from two to six shade cloth, or may be ordered with a dobby up to 16 harnesses for weaving cotton fancies.

The 40 inch X-2 loom weaves cloth one meter wide of combed or carded yarns at a speed of from 192 to 204 picks per minute, speed depending upon local conditions, such as yarn count, warp preparation, humidification and nature of fabric.

It is being operated 30 looms per weaver on combed broadcloth and poplins; 36 per weaver on denims; 40 to 48 on drills, twills and flannels; 56 on sateens; and 63 and 72 to 110 per weaver on sheetings and print cloth.

The number of looms per fixer where special help removes the cloth varies from 78 to 120.

These figures of looms per weaver and per fixer are not exceptional or unusual. They are average examples of what well-run mills in the United States are doing.

The loom is heavier than older Draper looms, has counterbalanced loomsides with weight so distributed as to reduce vibration, has pressure lubrication, a shuttle to hold large yarn packages, and yarn beams up to 26″ in diameter. Larger beams are being experimented with and may be available later. All mechanisms and devices are of latest Draper design to facilitate quality output at high speed.

Mill records show it weaves fabrics at less cost than any other loom ever built.

The first Draper high speed loom, brought out in 1930, was the X Model, built to take the same wide range of cotton weaves as the E Model, the Draper loom most widely used up to 1930. A 40″ E Model loom ran at about 160 picks per minute. The X Model, designed to replace the E, ran at about 192 picks.

Four other models of high speed looms followed the X for various weaving conditions, such as heavy cottons, broad sheets and cotton fancies. The fourth of these new

models was the very superior loom for rayons, the XD, described farther along in this Digest.

The experience gained in building these high speed models and Draper's close observation of their operation in the mills of the United States led to the redesign of the X Model.

The X-2 Model was the result of this redesign. It has all the new features and improvements fully tested and approved in the other models. It will weave at the highest speed of any Draper loom.

The first X-2 looms were sold in 1941. They were immediately in great demand and proved a success.

Greater Speed in 1944

But as Mr. Charles F. Kettering, long-time head of General Motors research, has so aptly phrased it:

"Just the minute you get satisfied with what you've got, the concrete has begun to set in your head."

Draper research and experiment never indulges in self-complaisant satisfaction. Ever inspired by their insatiable desire for something better—for the developed speed of these early X-2 looms did not reach the high aim set by Draper—they redesigned this model and produced a new series of X-2 looms in 1944 capable of attaining a speed on many common fabrics of 204 picks per minute.

More than 30,000 X-2 looms of this improved series have been installed in mills to the entire satisfaction and profit of operators in the United States and other countries throughout the world. Thousands more are now on current orders.

Working Out Problems of Rayon Weaving

Draper Corporation built its first loom for rayon in 1921, nearly 30 years ago, when cotton mills in the United States began to reach out for their share in the weaving of fabrics from the new man-made fiber.

Draper research and its inventors worked in close co-operation with the mills on the early problems. By 1930 hundreds of mills had woven millions of yards of rayons on Draper rayon looms—fairly satisfactorily to the mills but not up to standards set by Draper. One problem proved especially hard to solve.

The self-threading shuttle of the bobbin-changing loom, which was not fully threaded-up until the second pick, might lay a loose first pick. A shuttle-changer did not have this fault, and Draper built an excellent shuttle-changer.

This shuttle-changer served the industry well for five years, but proved only a temporary episode in the development of rayon weaving. Busy Draper researchers came up in 1937 with the first-pick tension shuttle eye which laid the first pick with the same even tension as the others.

Not a mill in the United States had any desire for a shuttle-changer when it could get the greater economy and efficiency of a bobbin-changer that would lay the first pick properly.

The reign of the shuttle-changer for the weaving of rayon is as dead as yesterday's faded rose.

XD Model for Quality Rayons

The climax of Draper's 20 years of experience in developing looms for rayon came with the debut in 1939 of the XD Model.

It was the first rayon loom Draper was willing to say met the high ideals it had set. Equipped with the shuttle with the first-pick tension eye, it weaves both filament and spun rayon fabrics of the highest quality.

Looms 44″ wide are weaving 44″ taffetas at 170 to 180 picks per minute, 40 to 48 looms per weaver.

In this story of Draper loom models and their use we haven't space to go into mechanical details of this loom.

You can obtain catalogs of all Draper looms from the company, or its representative in your country.

In brief, it has counterbalanced frame to minimize vibration, pressure lubrication, anti-friction bearings at vital points, take-up of modified silk type, and may be ordered with dobby up to 25 harnesses or cam motion up to 10 harnesses.

More than 32,000 XD looms have been sold to mills in the United States and other countries throughout the world producing a wide variety of one-shuttle rayons of the highest quality.

New Rayon Fabrics

The XD loom played a very interesting part in the development in the United States of an entirely new line of rayon fabrics.

When weavers saw the high quality of rayon fabrics that came from this loom and the low cost at which they could be woven on a one-shuttle loom, they sensed their opportunity and began to design new fabrics to catch the popular fancy.

Rejecting the types of fabrics of the silk weavers that call for crepe filling and box looms, they created many new and pleasing designs using one-way crepe filling and combinations of yarn of varying rayon types in the warp.

The designers found they had a wide field, and the fabrics they brought out won great favor in the market, due to the beauty and quality of the cloth and the lower price at which they could be sold.

The result: 70 to 75 per cent of all rayon fabrics woven in the United States are made on Draper looms.

At the present time we can fill orders for any of our high speed looms within six months after the receipt of approved specifications and completion of financial arrangements—and frequently within four months.

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